

REMARKS

Responsive to the outstanding Office Action, applicant has carefully studied the Examiner's rejections and the comments relative thereto. Favorable reconsideration of the application is respectfully requested in light of the following detailed arguments.

In the outstanding Office Action, the Examiner has indicated that claims 3-7, 22 and 23 are objected to as being based on a rejected base claim, but would be allowable if rewritten in independent form, containing the limitations of their respective base claims and any intervening claims. For the reasons stated below, it is believed that broader claim coverage is available.

Claims 1 and 8-16 were rejected under 35 USC §103 as being unpatentable over US 5,965,246 to Guiselin et al. Claims 17-19 and 31-33 were rejected under 35 USC §103 as being unpatentable over Guiselin in view of US 5,935,702 to Macquart. Claims 20, 21, 24-30 and 34-36 were rejected under 35 USC §102(e) as anticipated by, or in the alternative under 35 USC §103 as being obvious over Guiselin.

Before discussing the prior art in detail, applicants wish to review the present invention as disclosed in independent claims 1, 21 and 34. Claim 1 discloses a process for the production of a heat-treatable low emissivity coated glass. The process comprises depositing an underlayer onto a glass substrate by a pyrolytic deposition process, and subsequently depositing a reflective metal layer by a vacuum deposition method, directly on the underlayer.

Claim 21 discloses a heat-treatable low emissivity coated glass comprising a glass substrate having a multilayer coating on one surface. The multilayer coating comprises a pyrolytically deposited underlayer which is deposited onto the glass substrate, a vacuum deposited reflective metal layer that is deposited directly on the underlayer, and a vacuum deposited anti-reflection layer.

Claim 34 discloses a heat-treatable low emissivity coated glass. The glass comprises a glass substrate having a multilayer coating on one surface. The multilayer coating comprises an oxygen scavenging underlayer deposited on the substrate, a vacuum deposited reflective metal layer that is deposited directly on the underlayer and a vacuum deposited anti-reflection layer.

Guiselin discloses a glass substrate coated with a stack of thin layers. At least one of the layers reflects in the infrared or solar radiation range and comprises a dielectric material. This

dielectric layer is disposed between first and second coatings. An interlayer with a refractive layer less than that of the substrate is interposed between the substrate and the coating stack. In column 3, line 11, to column 3, line 34, Guiselin indicates that “it may be advantageous to combine the two types of techniques and thus deposit the interlayer directly on the glass of a float glass of a float glass ribbon by pyrolysis. Then in a subsequent step ... the other layers may be deposited on the glass by sputtering.” Guiselin suggests that the interlayer 2 can be deposited by pyrolytic deposition and the first dielectric coating 3, the silver layer 4, the protective layer 5 and the second dielectric layer 3 by pyrolysis. Gueseln nowhere teaches or suggests the possibility of deposition both underlayer 2 and dielectric layer 3 by pyrolysis. Instead Guiselin teaches the deposition of a coating stack (layers 3, 4, 5 and 6) by vacuum sputtering on a glass substrate having an underlayer already deposited. Further, with regard to the article claims, Guiselin teaches a dielectric layer disposed between the underlayer and the reflective metal layer disposed above it.

The deposition of Guiselin’s silver layer on top of a first dielectric layer is consistent with conventional wisdom. Nowhere does Guiselin teach or suggest the possibility of depositing the underlayer through a pyrolytic process and directly depositing the reflective metal layer directly on the pyrolytically deposited underlayer. Thus, the teaching and suggestion of Guiselin is contrary to the current claims placing the reflective metal layer directly on underlayer.

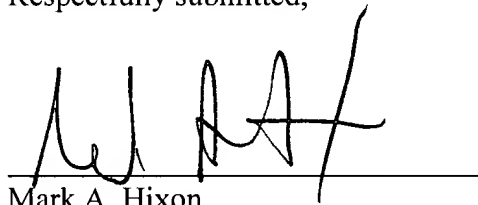
Macquart discloses a transparent glass substrate, provided with a stack of thin layers having at least one metallic layer having properties in the infrared range, particularly having low emissivity. Two coatings having a base of dielectric material located one under and the other over the layer also have properties in the infrared range. A protective metallic layer is placed immediately over an in contact with the layer having properties in the infrared range. In order to prevent the modification of properties of the stack, particularly optical and thermal properties, in the case where the substrate is submitted to a thermal treatment of the tempering or bending kind, the second coating having a base of dielectric material, includes a barrier layer for the diffusion of oxygen of a thickness of at least 10 nanometers and preferably of at least 20 nanometers, and further, the layer having properties in the infrared range is directly in contact with the underlying dielectric coating.

The coating stacks disclosed by Macquart are similar to those discussed in Guiselin. The Macquart reference teaches coating stacks that are relatively unaffected by exposure to elevated temperatures. The Macquart layers teach a first dielectric layer, primer layer 3, disclose between the barrier layer 2 and the silver layer 4. Thus, Macquart also fails to teach or suggest the deposition of a metal layer directly on a pyrolytically deposited layer. Therefore, it is respectfully submitted that since neither of the references teach or suggest this feature, that no reasonable combination of these references can teach this feature of the present invention.

For the reasons above, it is submitted that independent claims 1, 21 and 34 are allowable over the applied art of record. The remaining claims are believed to be allowable based, at least, upon their dependence from allowable base claims as shown above.

Should the Examiner wish to modify any of the language of the claims, applicants' attorney suggests a telephone interview in order to expedite the prosecution of the application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'M. A. Hixon', is written over a horizontal line.

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